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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,522	12/26/2000	Tomoharu Kajiyama	H-960	1494

7590

12/04/2001

Beall Law Offices  
104 East Hume Avenue  
Alexandria, VA 22301

EXAMINER

SISSON, BRADLEY L

ART UNIT	PAPER NUMBER
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1655

DATE MAILED: 12/04/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/720,522

Applicant(s)

KAJIYAMA ET AL.

Examiner

Bradley L. Sisson

Art Unit

1655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 & 26 September 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 21-25 is/are rejected.
- 7) ☒ Claim(s) 2 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Notice To Comply*.

## **DETAILED ACTION**

### ***Sequence Rules Compliance***

1. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825 for the reason(s) set forth on the attached Notice To Comply With Requirements For Patent Applications Containing Nucleotide Sequence And/Or Amino Acid Sequence Disclosures. Applicant must comply with the requirements of the sequence rules (37 CFR 1.821 - 1.825) before the application can be examined under 35 U.S.C. §§ 131 and 132.

### ***Specification***

2. The use of the trademark TWEEN 20 has been noted in this application; see page 51. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

3. The disclosure is objected to because of the following informalities: Nucleotide sequences appear that are not accompanied with their requisite SEQ ID NO.

Appropriate correction is required.

***Response to Amendment***

4. The version of claims 21 and 24 that was requested to be entered was found to contain markings of changes made; see claim 21 at line 11; and claim 24 at line 3. Applicant is requested to provide a corrected amendment whereby clean copies of claims are to be entered.

***Claim Objections***

5. Claims 2 and 7 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 2 seemingly addresses reagents that are used during a particular procedure but are not necessarily part of the device. And claim 7 addresses the manner in which voltage is applied. In the present case, the claims are all drawn to the apparatus or device and not to a method of use. Accordingly, it is not clear how claims 2 and 7 further limit the apparatus of claim 1 from which they depend.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-14 and 21-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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8. Claim 5 is indefinite with respect to what constitutes "TFT gate lines." Applicant is requested to use the full name for the abbreviation at its first instance in a line of claims, followed by the abbreviation in parenthesis.

9. Claim 6 recites the limitation "the region in which the ECL occurs" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

10. Claims 1-14 and 21-25 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: That which exists between each of the elements set forth in the claims. While the claims try to paint a picture of the elements that the device is comprised of and language is found directed to how they may be made to function, there is no structural relationship found between the various elements. It is noted that claim 5 states that "TFT gates lines [are] connected to said plurality of electrodes," however, there is no structural relationship between the electrodes in the detecting cell, the voltage-applying unit and the optical detector.

11. Claim 4 is confusing as a result the changing number as found in the expression "said second electrode is configured of a plurality of electrodes." Seemingly the "electrode" (singular) is in actuality a plurality. Clarification is requested.

12. Claim 6 recites the limitation "said first electrodes" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 1, from which claim 6 depends, refers to a first electrode, not electrodes.

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13. Claims 1-14 and 21-25 are indefinite with respect to just what constitutes "luminous areas."

14. Claim 10 is confusing as to how a plurality of second electrodes are all opposite to one first electrode.

15. Claim 11 recites the limitation "the central part" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim. Similar issue exists with respect to claim 23 (line 5).

16. Claim 24 is confusing as a result of the expression "and arranged in one direction in parallel with part of said first electrode." How many parts are there to the "first electrode" and just which part is the alignment predicated upon?

17. Claim 25 is confusing as to how one achieves hybridization "between DNA probes fixed to said luminous areas." From reading the first indented portion of claim 25 it would appear that the probes are not located between the luminous areas, but are bound to the electrodes that are in the luminous areas. Accordingly, the hybridization would be between the target polynucleotide and probes that are bound to an electrode, not to an area that exists between the electrodes.

18. Claims 1-14 and 21-25 lack clarity as to just what constitutes different "types" of probes. Using claim 25 as an example, only one type of probe is defined- one that has a phosphorothioate bond. Clarification is requested as to whether applicant intends to refer to different "types" of probes as meaning probes that have different nucleotide sequences and/or lengths of sequences, or whether some other meaning to be applied.

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*Conclusion*

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is 703-308-3978.

The examiner can normally be reached on Monday through Thursday from 6:30 AM to 5 PM.

20. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones can be reached on 703-308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3592 for regular communications and 703-308-0294 for After Final communications.

21. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.



Bradley L. Sisson  
Primary Examiner  
Art Unit 1655

bls  
December 2, 2001